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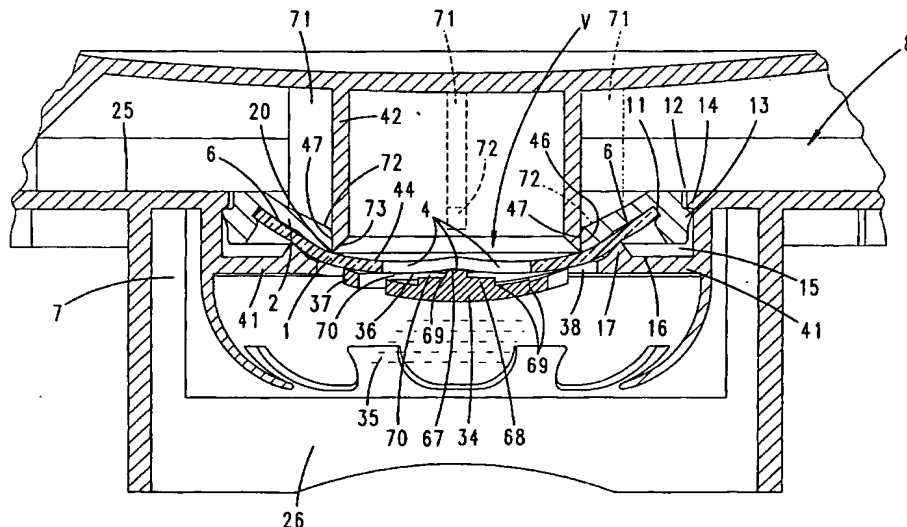
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WO 2004/026721 A3

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102 43 067.5 16. September 2002 (16.09.2002) DE
103 33 638.9 24. Juli 2003 (24.07.2003) DE
103 42 406.7 12. September 2003 (12.09.2003) DE
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- (74) Anwälte: MÜLLER, Enno usw.; Rieder & Partner, Corneliusstrasse 45, 42329 Wuppertal (DE).
- (81) Bestimmungsstaaten (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Bestimmungsstaaten (regional): ARIPO Patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), eurasisches Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), europäisches Patent (AT, BE, BG, CH, CY, CZ, DE,

[Fortsetzung auf der nächsten Seite]

(54) Title: SELF-CLOSING MEMBRANE VALVE

(54) Bezeichnung: SELBSTSCHLIESSENDES MEMBRAN-VENTIL



(57) Abstract: The invention relates to a self-closing membrane valve (V) comprising a slit membrane (1) and a cap-shaped holding element (2) which is associated with a receiving region (6) of the membrane (1). The aim of the invention is to provide a ready-to-use, pre-mountable membrane valve. To this end, the holding element (2) is connected to the membrane (1) in a positively locking manner or in a material fit, and is formed inside a closing element (7) in order to hold in an overlapping or locking manner on the peripheral outer edge side.

[Fortsetzung auf der nächsten Seite]

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DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,
PT, RO, SE, SI, SK, TR), OAPI Patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Veröffentlichungsdatum des internationalen

Recherchenberichts:

7. Oktober 2004

Veröffentlicht:

— mit internationalem Recherchenbericht

Zur Erklärung der Zweibuchstaben-Codes und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen.

(57) Zusammenfassung: Die Erfindung bezieht sich auf ein selbstschliessendes Membran-Ventil (V) mit einer geschlitzten Membran (1) und einem zugeordnet zu einem Aufnahmebereich (6) der Membran (1) kalottenförmig gestalteten Halterungsteil (2), und schlägt zur Erzielung eines einsatzfertig vormontierbaren Membran-Ventils vor, dass das Halterungsteil (2) mit der Membran (1) form- oder stoffschlüssig verbunden ist und zur umfangs-aussenrandseitigen Übergriifhalterung oder Rasthalterung in einem Verschlussenteil (7) ausgebildet ist.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/10253

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B65D47/20 B65D47/08 B29C43/18 B29C69/02		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 B65D B29C		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 03/091124 A (ALPLA WERKE ALWIN LEHNER GMBH; SUFFA UDO (DE)) 6 November 2003 (2003-11-06) the whole document & DE 102 18 363 A 13 November 2003 (2003-11-13) cited in the application	1-8, 10, 11, 13-17, 21-24
X	US 6 367 668 B1 (SCHWANENBERG SIGURD) 9 April 2002 (2002-04-09)	16
Y	figures 10, 13	21
A		1
Y	EP 0 495 435 A (PITTMAY CORP) 22 July 1992 (1992-07-22)	21
A	figures 2, 4	25-32
-/-		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "Z" document member of the same patent family		
Date of the actual completion of the international search 9 June 2004		Date of mailing of the international search report 24 06 2004
Name and mailing address of the ISA European Patent Office, P.O. Box 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Bridault, A

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10253

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 927 567 A (FILLMORE WILLIAM E) 27 July 1999 (1999-07-27)	33-35
A	column 2, line 61 - column 3, line 20; figures 11-13	36
Y	US 6 371 340 B1 (RAMSEY CHRISTOPHER PAUL ET AL) 16 April 2002 (2002-04-16) column 4, line 29 - line 32	33-35
Y	EP 0 920 967 A (BECTON DICKINSON CO) 9 June 1999 (1999-06-09) paragraph [0019]	35
A	WO 98/38102 A (WEENER PLASTIK GMBH CO KG; HACKMANN BERND (DE); SCHORNER HORST (DE) 3 September 1998 (1998-09-03) page 24, line 27 - page 25, line 29; figures 1,5	1,16,33, 36
A	GB 2 330 577 A (CODA PLASTICS LTD) 28 April 1999 (1999-04-28) page 6, line 9 - line 22 page 7, line 20 - line 24 page 9, line 25 - line 34; figures 1,8	1,16
A	EP 0 442 379 A (GUALA SPA) 21 August 1991 (1991-08-21) column 4, line 18 - column 5, line 14; figures 7-11	33

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INTERNATIONAL SEARCH REPORT

International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 03/10253

Box II

The International Searching Authority has determined that this international application contains multiple (groups of) inventions, as follows:

1. Claims 1-32

Self-closing membrane valve comprising a holder part which can positively engage in a locking part.

2. Claims 33 to 35

Method for producing a self-closing membrane valve, in which the membrane is formed on a holder part.

3. Claim 36

Self-closing membrane valve, characterised by the connecting of the membrane to the holder part.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/10253

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/10253

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			01-04-1995

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